CLAIMS

What is claimed is:

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- 1. An organophotoreceptor comprising an electrically conductive substrate and a photoconductive element on the electrically conductive substrate, the photoconductive element comprising:
 - (a) a charge transport material having the formula

where X and X' are, each independently, a (9-fluorenylidene)malononitrile group, and Z is a linking group having the formula - $(CH_2)_m$ -, branched or linear, where m is an integer between 1 and 30, inclusive, and one or more of the methylene groups may be replaced by O, S, C=O, Si=O, S(=O)₂, P(=O)₂, an aromatic group, a heterocyclic group, an aliphatic cyclic group, a Si(R₁)(R₂) group, a BR₃ group, a NR₄ group, a CHR₅ group, or a CR_6R_7 group where R₁, R₂, R₃, R₄, R₅, R₆, and R₇ are, each independently, H, halogen, hydroxyl, thiol, an alkoxy group, an alkyl group, an alkenyl group, an aromatic group, a heterocyclic group, or a part of a cyclic ring; and

- (b) a charge generating compound.
- 2. An organophotoreceptor according to claim 1 wherein X and X, each independently, have the formula

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where Y is O, S, or NR₈ and R₈ is H, an alkyl group, an alkenyl group, an aromatic group, or a heterocyclic group.

3. An organophotoreceptor according to claim 1 wherein Z comprises an aromatic group or a heterocyclic group.

4. An organophotoreceptor according to claim 1 wherein the charge transport material has a formula selected form the group consisting of the following:

NC CN NC CN

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- 5. An organophotoreceptor according to claim 1 wherein the photoconductive element further comprises a second charge transport material.
- 6. An organophotoreceptor according to claim 5 wherein the second charge transport material comprises a charge transport compound.
- 7. An organophotoreceptor according to claim 1 wherein the photoconductive element further comprises a binder.

- 8. An electrophotographic imaging apparatus comprising:
- (a) a light imaging component; and

- (b) an organophotoreceptor oriented to receive light from the light imaging component, the organophotoreceptor comprising an electrically conductive substrate and a photoconductive element on the electrically conductive substrate, the photoconductive element comprising:
 - (i) a charge transport material having the formula

where X and X' are, each independently, a (9-fluorenylidene)malononitrile group, and Z is a linking group having the formula -(CH₂)_m-, branched or linear, where m is an integer between 1 and 30, inclusive, and one or more of the methylene groups may be replaced by O, S, C=O, Si=O, S(=O)₂, P(=O)₂, an aromatic group, a heterocyclic group, an aliphatic cyclic group, a Si(R₁)(R₂) group, a BR₃ group, a NR₄ group, a CHR₅ group, or a CR₆R₇ group where R₁, R₂, R₃, R₄, R₅, R₆, and R₇ are, each independently, H, halogen, hydroxyl, thiol, an alkoxy group, an alkyl group, an alkenyl group, an aromatic group, a heterocyclic group, or a part of a cyclic ring; and

- (ii) a charge generating compound.
- 9. An electrophotographic imaging apparatus according to claim 8 wherein X 20 and X', each independently, have the formula

where Y is O, S, or NR_8 and R_8 is H, an alkyl group, an alkenyl group, an aromatic group, or a heterocyclic group.

- 10. An electrophotographic imaging apparatus according to claim 8 wherein Z comprises an aromatic group or a heterocyclic group.
- An electrophotographic imaging apparatus according to claim 8, wherein
 the charge transport material has a formula selected form the group consisting of the following:

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- 12. An electrophotographic imaging apparatus according to claim 8 wherein the photoconductive element further comprises a second charge transport material.
- 13. An electrophotographic imaging apparatus according to claim 12 wherein second charge transport material comprises a charge transport compound.

- 14. An electrophotographic imaging apparatus according to claim 8 further comprising a liquid toner dispenser.
 - 15. An electrophotographic imaging process comprising;

- (a) applying an electrical charge to a surface of an organophotoreceptor comprising an electrically conductive substrate and a photoconductive element on the electrically conductive substrate, the photoconductive element comprising
 - (i) a charge transport material having the formula

- where X and X' are, each independently, a (9-fluorenylidene)malononitrile group, and Z is a linking group having the formula -(CH₂)_m-, branched or linear, where m is an integer between 1 and 30, inclusive, and one or more of the methylene groups may be replaced by O, S, C=O, Si=O, S(=O)₂, P(=O)₂, an aromatic group, a heterocyclic group, an aliphatic cyclic group, a Si(R₁)(R₂) group, a BR₃ group, a NR₄ group, a CHR₅ group, or a CR₆R₇ group where R₁, R₂, R₃, R₄, R₅, R₆, and R₇ are, each independently, H, halogen, hydroxyl, thiol, an alkoxy group, an alkyl group, an alkenyl group, an aromatic group, a heterocyclic group, or a part of a cyclic ring; and
 - (ii) a charge generating compound.
- (b) imagewise exposing the surface of the organophotoreceptor to radiation to
 20 dissipate charge in selected areas and thereby form a pattern of charged and uncharged areas on the surface;
 - (c) contacting the surface with a toner to create a toned image; and
 - (d) transferring the toned image to substrate.
- 25 16. An electrophotographic imaging process according to claim 15 wherein X and X', each independently, have the formula

where Y is O, S, or NR_8 and R_8 is H, an alkyl group, an alkenyl group, an aromatic group, or a heterocyclic group.

- 5 17. An electrophotographic imaging process according to claim 15 wherein Z comprises an aromatic group or a heterocyclic group.
- 18. An electrophotographic imaging process according to claim 15 wherein the charge transport material has a formula selected from the group consisting of the following:

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- 19. An electrophotographic imaging process according to claim 15 wherein the photoconductive element further comprises a second charge transport material.
- 20. An electrophotographic imaging process according to claim 19 wherein the second charge transport material comprises a charge transport compound.
- 21. An electrophotographic imaging process according to claim 15 wherein the photoconductive element further comprises a binder.
 - 22. An electrophotographic imaging process according to claim 15 wherein the toner comprises a liquid toner comprising a dispersion of colorant particles in an organic liquid.
 - 23. A charge transport material having the formula

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where X and X' are, each independently, a (9-fluorenylidene)malononitrile group, and Z is a linking group having the formula $-(CH_2)_{m^-}$, branched or linear, where m is an integer between 1 and 30, inclusive, and one or more of the methylene groups may be replaced by O, S, C=O, Si=O, S(=O)₂, P(=O)₂, an aromatic group, a heterocyclic group, an aliphatic cyclic group, a Si(R₁)(R₂) group, a BR₃ group, a NR₄ group, a CHR₅ group, or a CR₆R₇ group where R₁, R₂, R₃, R₄, R₅, R₆, and R₇ are, each independently, H, halogen, hydroxyl, thiol, an alkoxy group, an alkyl group, an alkenyl group, an aromatic group, a heterocyclic group, or a part of a cyclic ring.

24. A charge transport material according to claim 23 wherein X and X', each independently, have the formula

where Y is O, S, or NR_8 and R_8 is H, an alkyl group, an alkenyl group, an aromatic group, or a heterocyclic group.

- 5 25. A charge transport material according to claim 23 wherein Z comprises an aromatic group or a heterocyclic group.
 - 26. A charge transport material according to claim 23 wherein the charge transport material has a formula selected from the group consisting of the following:

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NC_CN

NC_CN NC_CN NC_CN NC_CN NC_CN

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